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1 9. The wafer according to claim 1, wherein the pits are on at least one surface of
2 the wafer selected from the group consisting of a front surface, a back surface, and a side
3 surface.

1 10. The wafer according to claim 1, wherein the pits are at least 2.5 um deep.

1 11. The wafer according to claim 1, wherein the pits are on a side surface of the
2 wafer extending from a front surface of the wafer to a back surface of the wafer.

1 12. The wafer according to claim 11, wherein the pits on the side surface of the
2 wafer are formed prior to slicing the wafer from a boule by providing diagonal lines in
3 the boule to provide a unique pattern on each wafer sliced from the boule.

1 13. The wafer according to claim 1, wherein the pits are readable by a reader's
2 eye.

1 14. The wafer according to claim 1, wherein the pits are readable with a laser
2 reading device.

1 15. The wafer according to claim 1, further comprising a coating on the surface of
2 the pits.

1 16. The wafer according to claim 1, wherein the pits have a width of at most
2 about 1 mm and a depth of at most about 1 mm.

1 17. The wafer according to claim 1, wherein a bottom surface of the pits is

1 curved.

1 18. The wafer according to claim 1, wherein at least one of the pits is
2 perpendicular to a top surface and a bottom surface of the wafer.

1 19. The wafer according to claim 1, wherein at least one of the pits is angled with
2 respect to a line perpendicular to a top surface and a bottom surface of the wafer.

1 20. The wafer according to claim 1, wherein at least one of the pits has curved
2 sidewalls.

1 21. The wafer according to claim 1, wherein the pits have at least two different
2 widths.

1 22. The wafer according to claim 1, wherein the pits are machine-readable.

1 23. The wafer according to claim 8, wherein the pits are arranged in the back
2 surface of the wafer.

1 24. The wafer according to claim 23, wherein groups of the pits have the shape of
2 at least one of letters and numbers.

1 25. The wafer according to claim 24, wherein each group of pits has a width of
2 about 2 mm and a height of about 5 mm.

1 26. The wafer according to claim 24, wherein adjacent groups of pits are
2 separated from each other by a distance of about 2 mm.

1 27. The wafer according to claim 24, wherein each group of pits includes a
2 machine-readable set of spaces for pits, each space comprising 2 columns each
3 comprising 32 pits.

1 28. The wafer according to claim 1, wherein light striking spaces between the pits
2 form interference fringes.

1 29. The wafer according to claim 1, wherein light striking the pits is not reflected.

1 30. The wafer according to claim 1, wherein light striking the pits is reflected
2 with a phase change.

1 31. The wafer according to claim 1, wherein the pits comprise at least one
2 location pit for providing locational reference to a plurality of informational pits.

3 32. The wafer according to claim 31, wherein the location pit is arranged in a side
4 edge of the wafer and the informational pits are located in a top surface or a bottom
5 surface of the wafer.

1 33. The wafer according to claim 1, wherein the pits have the same widths and at
2 least two different lengths.

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1 37. A method of encoding information on a semiconductor wafer, comprising:
2 converting the information into a digital form; and
3 forming pits readable before, during and after completion of processing on the
4 wafer corresponding to the digital form of the information in the semiconductor wafer.

1 38. The method according to claim 37, wherein forming the pits comprises:
2 forming a line of pits having two different lengths, the line of pits corresponding
3 to the digital form of the information.

1 39. The method according to claim 37, further comprising:
2 forming a reference point, such that the pits are located a predetermined distance
3 from the reference point.

1 40. The method according to claim 37, further comprising:
2 providing the pits with a detectable contrast with respect to surrounding portions
3 of the wafer.

1 41. The method according to claim 37, wherein the pits are formed prior to
2 cutting the wafer from a boule and forming the pits comprises:
3 forming a first, curved groove in the boule;
4 forming at least one linear groove in the boule; and
5 slicing the boule into wafers.

1 42. The method according to claim 37, further comprising:
2 coating the pits with a coating.

1 43. The method according to claim 37, further comprising:
2 reading the information represented by the pits.

1 44. The method according to claim 43, wherein the information is read with a
2 machine.

1 45. The method according to claim 43, wherein the information is readable by an
2 unaided human eye.

1 46. The method according to claim 37, wherein said pits are formed before
2 processing of the wafer begins, during wafer processing, or after wafer processing is
3 completed.

1 47. The method according to claim 46, wherein said pits are formed during wafer
2 processing to record information about the processing.

1 48. The method according to claim 46, wherein pits previously formed are
2 altered.

1 49. The method according to claim 46, further comprising the step of reading pits
2 formed during processing and using the information read to determine a subsequent
3 process parameter.

1 50. The method according to claim 37, wherein pits previously formed are
2 invalidated.

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1 51. A system for encoding information on a semiconductor wafer and reading the
2 information, the system comprising:

3 a plurality of pits formed on the semiconductor wafer in an information-providing
4 pattern and being readable before, during and after completion of processing on the
5 wafer; and

6 means for reading the information encoded by the pits.

1 52. The system according to claim 51, wherein the information reading means
2 comprises at least one laser.

1 53. The system according to claim 51, wherein the information reading means
2 comprises at least one interferometer.

1 54. The system according to claim 51, wherein the information reading means
2 comprises at least one linear diode array.

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